

Title (en)
NETWORK ARCHITECTURE FOR 3D IMAGE PROCESSING

Title (de)
NETZWERKARCHITEKTUR ZUR 3D-BILD-VERARBEITUNG

Title (fr)
ARCHITECTURE DE RÉSEAU DE TRAITEMENT D'IMAGES 3D

Publication
EP 4202825 A1 20230628 (EN)

Application
EP 21216302 A 20211221

Priority
EP 21216302 A 20211221

Abstract (en)
A mechanism for processing input 3D image data. In a first phase, the input 3D image data is separately processed using one or more neural networks to produce one or more modified 3D image data. In a second phase, the input 3D image data and the modified 3D image data are processed using another neural network to produce an output. The one or more neural networks that produce the modified 3D image data are configured to process slices or sub-volumes of the input 3D image data to produce modified 3D image data.

IPC 8 full level
G06T 7/00 (2017.01)

CPC (source: EP)
G06T 7/0012 (2013.01); **G06T 2207/10072** (2013.01); **G06T 2207/20081** (2013.01); **G06T 2207/20084** (2013.01)

Citation (applicant)
• RONNEBERGEROLAFPHILIPP FISCHERTHOMAS BROX: "International Conference on Medical image computing and computer-assisted intervention", 2015, SPRINGER, article "U-net: Convolutional networks for biomedical image segmentation"
• OZGIIN ÇIÇEKAHMED ABDULKADIRSOEREN S. LIENKAMPTHOMAS BROXOLAF RONNEBERGER: "3D U-Net: Learning dense volumetric segmentation from sparse annotation", PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON MEDICAL IMAGE COMPUTING AND COMPUTER-ASSISTED INTERVENTION, 17 October 2016 (2016-10-17)

Citation (search report)
• [XAI] US 2020058126 A1 20200220 - WANG YUNZHI [US], et al
• [XI] US 2021225000 A1 20210722 - GUO DAZHOU [US], et al
• [XI] US 2020151879 A1 20200514 - MORADI MEHDI [US], et al
• [XI] US 2021374947 A1 20211202 - SHIN HOO CHANG [US], et al
• [XI] CHENGJIA WANG ET AL: "A two-stage 3D Unet framework for multi-class segmentation on full resolution image", ARXIV.ORG, CORNELL UNIVERSITY LIBRARY, 201 OLIN LIBRARY CORNELL UNIVERSITY ITHACA, NY 14853, 12 April 2018 (2018-04-12), XP080870068

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4202825 A1 20230628; WO 2023117953 A1 20230629

DOCDB simple family (application)
EP 21216302 A 20211221; EP 2022086725 W 20221219